Clinical Section

* Treatment of Diabetes Mellitus

By

A. HOLLENBERG, B.A., B.Sc., M.D. (Man.)

Associate Physician, St. Boniface Hospital

Lecturer in Medicine, University of Manitoba

For the purpose of treatment diabetes is divided up into two types—the mild and the severe.

The Mild Type. The mild type may usually be treated out of hospital and it is only the occasional case that requires hospitalization. The patient is put on a basal diet, which for an adult is 25 calories per kilo of body weight. The caloric requirement is of course based on the ideal weight and not the actual weight of the patient. It is obvious an obese patient should only be put on a diet for his ideal weight.

The first consideration in the preparation of the diet is the total caloric requirement, which in a patient of say 70 Kg., would be 70 x 25=1,750 calories. The protein requirement is between two-thirds and one gram per Kg. I usually prefer one gram per kilo, and in the mentioned patient the protein requirement would be 70 grams. The carbohydrate requirement is usually three to four times that of the protein. In this case, say three times the amount of the protein would make the carbohydrate 210 grams.

Now, one gram of carbohydrate as well as one gram of protein each produce four calories (4.2 is correct). The caloric value in the above diet of the protein and carbohydrate is then (70+210) x 4=1,120 calories. The caloric value left for fat is then 1,750—1,120=630 calories. One gram of fat is equivalent to 9 calories. Therefore, the fat value of the diet is 630 ÷ 9=70 grams. The diet is now written as P70 C210 F70. The sugar value of this diet, of course, must next be calculated and it consists of three-fifths of P, all of C, and one-tenth of F., which is P42 C210 F7. The total sugar value of that diet is then (42+210+7)= 259 grams.

In balancing the patient, a twenty-four hour sample of urine is collected after the third day and its total volume measured. A sample brought into the office is estimated for sugar. Say in the above case 2,000 cc. of urine were passed of which the sugar content was 2%, the sugar discovered in the urine is two one-hundredths of 2,000=40 grams. The patient's sugar tolerance, then, is the difference between the sugar value of the diet and the sugar excreted in the urine—i.e., 259—40= 219 grams.

Knowing this, two things can be done. First the diet may be reduced so that its sugar value is 219 grams, or secondly the sugar excreted in the urine may be covered with insulin at the rate of one unit of insulin for two grams of sugar, namely, 20 units. Daily urinalyses are kept up to ascertain whether the patient's tolerance is improving and in that event the insulin is reduced. The patient is now balanced on a basal diet, i.e., he will neither gain nor lose. If he needs more food the diet is increased, say 10%, and the added amount of sugar excreted in the twenty-four hour specimen is covered with insulin. It must be remembered that in many cases the carbohydrate tolerance will rise if the patient has been balanced, so that in stepping up the diet very often only a small amount of it needs to be covered with insulin.

It is not wise to attempt to keep your patient absolutely sugar free in the twenty-four hour sample. In older people, and particularly people with arteriosclerosis, it is advisable to keep a trace of sugar in the urine all the time because it minimizes as far as possible attacks of hypoglycaemia with angina pectoris or thrombosis.

In pregnancy the aim must also be not to keep the patient absolutely sugar free. The chief aim in the balancing of all diabetics is to keep them acetone and diacetic acid free, but allowing a trace of sugar to remain in the urine. In acute infections, whether they be of the catarrhal or suppurative types, the efficacy of insulin is decreased so that one unit may only burn one gram of glucose, or in less severe cases one and one-half grams of glucose. It must not then be forgotten that when these conditions occur complicating diabetes, the insulin must be stepped up accordingly in order to keep the patient balanced.

The Severe Type. This type is what is generally called the diabetes of precoma or coma. In a patient of this kind, in addition to vomiting, abdominal pain and stupor, the urine is loaded with sugar as well as a great deal of acetone and diacetic acid. If the blood sugar is taken it is usually over 300 mg. per 100 c.c. The treatment of this type of case, of course, must be decisive and cut out with definite principles in mind.

1. The first of those is to *burn glucose* and to get rid of the ketone bodies. In order that glucose might be burned more quickly, it is necessary to speed up the metabolism of the body by increasing its temperature. To that end hot water bottles are applied to the whole of the body in addition to whatever blankets are required. If the findings in the urine are as those outlined above, 50 units of insulin are given at once subcutaneously or intramuscularly for the average adult.

2. The second essential principle is to *facilitate excretion* of the ketone bodies. Those that are excreted do not, of course, have to be burned with glucose. To that end an enema is administered, fluids are forced and the stomach is washed

* Lecture delivered at the Post Graduate course on Endocrinology, January 20th, 1937.

with a weak baking soda solution. If the patient seems in shock, then caffeine sodium benzoate seven and one-half grams is given hypodermically and repeated every hour until the circulation becomes more steady. Hot coffee when the patient can drink is useful in the stead of the latter, when it is not available.

3. *Urinalysis* is then repeated *every hour* until the patient has recovered from the acidosis. Provided there are sugar and acid bodies present in the urine, 20 units of insulin are administered every hour. In order to keep the blood supplied with sufficient glucose fore combustion with this insulin a "drink" is prepared of 20 grams of glucose which is made up of one teaspoon of corn syrup, the juice of one medium sized orange and one-third glass of milk. The milk is important so that the absorption of sugar from the stomach is not too quick. This "drink" is also administered every hour. The object is to maintain sugar in the urine in small amounts to safeguard against insulin shock. The "drink" is the sugar vehicle if the patient is not too comatose, otherwise one has to resort to intravenous administration of glucose in normal saline. The amount usually given is 500 c.c. of a 10% solution of glucose (=50 grams). Intravenous medication of this kind must be watched from the point of view of not overdistending the heart. Insulin should not be given intravenously as it is very often followed by anuria. Within 12 to 14 hours of such continuous hourly treatment, the patient will usually be roused from his stupor and be able to co-operate well in the treatment. As the diacetic acid leaves and only acetone and sugar remain only 15 units of insulin are given every hour. When the acetone leaves and sugar alone is left, it is then time to put the patient on a basal diet and to balance him as already outlined above.

The Surgical Diabetic. There are two types of surgical cases with diabetes — one in which the operation is *elective* and can wait until the patient is well prepared; the other type is the *emergency* diabetic in which the surgical condition takes precedence.

In the *elective case,* the patient is balanced so that there are no ketones in the urine. Give a "drink" and 20 units of insulin four hours before the operation. Post-operatively check the urine every two or three hours and administer glucose intravenously or by mouth with the necessary amount of insulin required to keep the urine ketone free. In a day or two the patient is ready for the balanced basal diet which he had before the operation and which can be continued.

In the *emergency case,* administer 500 c.c. of 10% glucose intravenously covering it with 50 units preceding the operation or during the operation. Urinalysis is done every hour or two, watching for ketone bodies. Insulin administered as required only when sugar is present in the urine in addition to the ketone bodies. Glucose is continuously administered either intravenously or by mouth according to the condition of the patient and the operative procedure. The whole aim is to provide enough insulin in a safe way until ketosis is overcome and the patient may be permitted to go on a basal diet.

Anaesthesia.

Chloroform. This is the worst anaesthetic for a diabetic, as it precipitates acidosis and is toxic to the heart.

Ether. Nearly as bad.

Gas. Ethylene or nitrous oxide are good general anaesthetics for a diabetic.

Local Anaesthetic is the best of all for diabetes and it may be combined with gas where the interest of the patient demands it.

Spinal Anaesthetic is good for the young diabetics but is dangerous in older arteriosclerotic diabetics because of the accompanying drop in blood pressure which it produces and the resultant predisposition to coronary or cerebral thrombosis.

Medical Complications of Diabetics.

The most common complication of diabetes apart from coma is that of arteriosclerosis, particularly affecting the heart, the brain, the extremities and viscera, in that order. In these patients, it is my object to keep sugar in the urine which insures a raised blood sugar level and thus nourishes any of the organs to which the narrowed and hardened vessels preclude a sufficient circulation. The raised blood sugar thus supplies the necessary energy in face of the deficient circulation. This is particularly to be remembered in the case of diabetics to be treated with associated angina pectoris.

The gangrene associated with diabetes is almost always arteriosclerotic and the only reason diabetes enters into the picture is that if the gangrene becomes infected the patient's outlook is much worse than in senile gangrene with the same infection.

Retinal changes are often observed in cases of long standing diabetes, which take on the form of a true retinitis or of change in the retina secondary to arteriosclerosis.

In cases of infection such as erysipelas, carbuncle, or other infective processes, the aim should be to keep the blood sugar as low as possible because of the possibility of the bacteria multiplying in a medium high in glucose content.

One of the most formidable complications is diabetic neuritis. This is a most intractable condition which is very slow to disappear, taking usually several months and often requiring opiates for its temporary alleviation. These cases are the most pathetic which one meets in the treatment of diabetes. It is said that alcoholic addiction associated with diabetes is often the cause of diabetic neuritis but quite a number of cases have no association with alcohol whatsoever and must be considered as coming from the disease itself.

Notes on Insulin.

The old insulin is a true solution and when injected subcutaneously produces an effect that lasts from four to six hours. It is usually administered twenty minutes before meals, once, twice or three times a day. There is an odd individual that is sensitive to the brand of insulin usually taken. These people may be tried on hog insulin instead of the usual beef insulin. If they are still sensitive with that change, then crystalline insulin is administered in combination with the beef insulin in gradually increasing amounts of the latter until the patient is desensitized.

Protamine-zinc-insulin. This is not a true solution, but a suspension of insoluble insulin. Its absorption from the skin is therefore prolonged and its effect for that reason extends well over the twenty-four hours. It is therefore necessary to take it only once a day where patients had to take the old insulin two or three times a day. Where a patient was taking 100 units of the old insulin in 24 hours, only 75 units of the protamine-zinc-insulin are usually required for the same effect. It is particularly useful in those cases which would go into insulin shock frequently with the old type of insulin. Its use in the treatment of coma is not to be recommended because of its slow action, whereas in the latter speed and quick action are the desiderata.

"STONE WALLS DO NOT A PRISON MAKE
NOR IRON BARS A CAGE."

Winter is a jailer who shuts us all in from the fullest vitamin D value of sunlight. The baby becomes virtually a prisoner, in several senses: First of all, meteorologic observations prove that winter sunshine in most sections of the country averages 10 to 50 per cent less than summer sunshine. Secondly, the quality of the available sunshine is inferior due to the shorter distance of the sun from the earth altering the angle of the sun's rays. Again, the hour of the day has an important bearing: At 8.30 a.m. there is an average loss of over 31%, and at 3.30 p.m., over 21%.

Furthermore, at this season the mother is likely to bundle her baby to keep it warm, shutting out the sun from baby's skin; and in turning the carriage away from the wind, she may also turn the child's face away from the sun.

Moreover, as Dr. Alfred F. Hess has pointed out, "it has never been determined whether the skin of individuals varies in its content of ergosterol" (synthesized by the sun's rays into vitamin D) "or, again, whether this factor is equally distributed throughout the surface of the body."

While neither Mead's Oleum Percomorphum nor Mead's Cod Liver Oil fortified with Percomorph Liver Oil constitutes a substitute for sunshine, they do offer an effective, controllable supplement especially important because the only natural foodstuff that contains appreciable quantities of vitamin D is egg-yolk. Unlike winter sunshine, the vitamin D value of Mead's antiricketic products does not vary from day to day or from hour to hour. —Advt.

Special Articles and Association Notes

The Manitoba Medical Association Review

Formerly the Bulletin of the Manitoba Medical Association

ESTABLISHED 1921

WINNIPEG, FEBRUARY, 1937

Published Monthly by the
MANITOBA MEDICAL ASSOCIATION
Editorial Office
101 MEDICAL ARTS BUILDING, WINNIPEG

Editor
C. W. MACCHARLES, M.D. (MAN.)
Advisory Editor
ROSS B. MITCHELL, B.A., M.D., C.M. (MAN.), F.R.C.P.(C.)
Business Manager
J. GORDON WHITLEY
Annual Subscription - $2.00

Editorial or other opinion expressed in this Review is not necessarily sanctioned by the Manitoba Medical Association.

Editorial

The Report on Medical Service for Unemployed

The Committee on Sociology of the Manitoba Medical Association have presented another report on illness amongst the unemployed in the City of Winnipeg. This is published elsewhere in this journal. The report follows the general lines of the previous ones. It gives an indication as to both the cause of illness and the cause of death amongst the population on relief. The mortality statistics would, of course, be available for the population generally, but morbidity statistics are rarely published. The average population involved in the survey was 31,497.

The costs of the medical services supplied by the doctors on the panel are all recorded, but the further costs for the care of the sick are not shown.

The expense of the medical fees, of course, is only a fraction of the normal costs and the figures cannot indicate the cost of medical services where the service includes the whole population.

Several factors have contributed to the success of the Winnipeg scheme. The most important is the fact that the scheme was an amicable arrangement between the city and the medical profession. In the details of the scheme the free choice of doctor, the payment for services rendered and the arrangements for consultations all have been fundamental principles without which the scheme would not have been satisfactory.

Minutes of Executive Meeting

Minutes of a Meeting of the Executive of the Manitoba Medical Association held in the Medical Arts Club Rooms on Wednesday, January 27th, 1937, at 6.30 p.m.

Present.

Dr. Geo. Clingan, Chairman	Dr. E. S. Moorhead
Dr. R. E. Dicks	Dr. J. D. Adamson
Dr. E. K. Cunningham	Dr. W. G. Campbell
Dr. P. H. T. Thorlakson	Dr. O. C. Trainor
Dr. W. E. R. Coad	Dr. S. G. Herbert
Dr. C. W. Burns	Dr. F. W. Jackson

The minutes of the last Executive meeting were read, and approved.

Business Arising out of the Minutes.

Dr. Trainor was asked to submit the report of the Committee on Specialism. He preceded the report by some remarks in reference to the method of appointing the National Committees by the Canadian Medical Association Executive, and advised he was of opinion that the Provincial Associations should make nominations to the National Committees, as they were best prepared to know who in their membership would be of the greatest value in the work of the particular Committees. Dr. Trainor then read his report, copy of which is on file, and moved its adoption.

In seconding the adoption of the report, Dr. Adamson pointed out the usual method used in the appointment of National Committees, and in the discussion that followed Dr. Campbell spoke on the registration of specialists, pointing out that any register should state definitely what the registration means and anyone so registered was not licensed to practice in any Province in Manitoba. He further stated that he thought before a man could have his name placed on a register of specialists, that he should have an enabling certificate from some Province showing that he could obtain a license to practice in that Province.

Dr. Thorlakson spoke on the indefiniteness of the report and suggested that the Committee should set standards in the various specialties. Dr. Trainor advised that his Committee did not have the necessary qualifications to draw up standards for the various specialties.

After considerable discussion it was suggested that Dr. Trainor add an amendment to his original report, suggesting to the College of Physicians and Surgeons of Canada that they ask for the appointment of Committees of various Specialties in order that standards might be set.

With the addition of this amendment the report of the Committee on Specialism was adopted, with instructions that a copy should be sent to the Secretary of the Canadian Medical Association.

Annual Meeting.

The question of Annual Meeting was discussed and in view of the fact that convocation is on May 19th, it was moved by Dr. W. G. Campbell, seconded by Dr. E. S. Moorhead: That the Annual Meeting be held on May 20th, 21st and 22nd. —Carried.

Discussion took place as to where the meeting should be held, and it was moved by Dr. J. D. Adamson, seconded by Dr. C. W. Burns: That the meeting should be held at the Fort Garry Hotel. —Carried.

Appointment of Programme Committee.

Consideration was then given to the appointment of the Programme Committee, and it was moved by Dr. J. D. Adamson, seconded by Dr. P. H. T. Thorlakson: That Dr. C. W. Burns be Chairman of the Programme Committee with power to add, and: That the President and Secretary be ex-officio members.

Dr. Burns addressed the meeting and asked for suggestions from the members present as to the type of programme which should be given, and on questioning the members present it appeared to be the concensus of opinion that a programme such as that given last year would be highly satisfactory.

Re. Training Schools for Nurses.

The Secretary made a report on the questionnaire sent out to the profession in rural Manitoba, and a summary of the report, which reads as follows, was given to the Executive.

Large Hospitals	17
Small	33
Immaterial	22
Medium	2
Not applicable	4

In view of the fact that the Minister of Health had asked for this information which would be transmitted on to the proper University officials, it was moved by Dr. R. E. Dicks, seconded by Dr. E. K. Cunningham: That a copy of this summary together with resolution passed by the Brandon and District Medical Society on the subject, be sent to the Minister of Health. —Carried.

Correspondence.

A letter was read from the Winnipeg Medical Society re. compulsory automobile insurance, and after discussion by Drs. Thorlakson, Burns and Adamson, it was moved by Dr. J. D. Adamson, seconded by Dr. C. W. Burns: That the Executive of the Manitoba Medical Association were in accord with the efforts being made by the Manitoba Motor League towards seeing that amendments be made to the Highway Traffic Act, with a view to making compulsory automobile insurance before any individual could obtain a license for a car. —Carried.

A letter was read from Dr. G. D. Shortreed in reference to sending in his resignation to the Association, and complaining about the resolution passed at the last Annual Meeting.

There was considerable discussion by the Treasurer and other members of the Committee, and the Secretary was to write a letter to Dr. Shortreed explaining in detail just how the amendment to the constitution had been brought about.

The question of a telephone for the Association came up for discussion, and the Secretary was instructed to have another week or two weeks check-up on incoming and out-going calls on Mr. Hewitt's telephone.

Report by Dr. Moorhead on the Last Executive Meeting of the C.M.A.

Dr. Moorhead made an extensive report on the last executive meeting of the Canadian Medical Association, copy of which is on file.

Correspondence between Dr. Moorhead, our representative on the Canadian Medical Association Executive, and the Secretary of the Association, Dr. T. C. Routley, was read by the Secretary, and also a memorandum re. the establishing of a National Research Council in Canada.

Drs. Adamson, Trainor, Thorlakson and Moorhead took part in the discussion, and pointed out that the subject would take considerable study. In view of the fact that the memorandum was of considerable length, it was moved by Dr. C. W. Burns, seconded by Dr. J. D. Adamson: That Dr. Moorhead's letter be approved protem, and: That the Secretary be instructed to have the proposal mimeographed and sent to all Members of the Executive. —Carried.

Dr. Moorhead then gave a brief report on the work of the Committee on Sociology.

There being no further business, the meeting adjourned.

FELLOWSHIP FOR MANITOBA GRADUATE

Our congratulations are tendered to Joseph Doupe, M.D. (Man. '34), M.R.C.P., who has recently been awarded the National Research Committee's Senior Fellowship in Neurological Research tenable at the National Hospital for Nervous Diseases, Queen Square, London. The Fellowship was made possible by the Sir Halley Stewart Trust placing at the disposal of the National Research Committee the sum of £500 tenable for three years.

Dr. Doupe is a grandson of the late Dr. David Young, Manitoba's pioneer psychiatrist and first superintendent of the Hospital for Mental Diseases at Selkirk.

Announcement

During 1937 the American College of Surgeons is planning a Sectional Meeting to be held in Edmonton, Alberta, on March 24 and 25. Headquarters will be at the Macdonald Hotel, and the following provinces will participate:

ALBERTA, SASKATCHEWAN, MANITOBA.

An active Committee on Local Arrangements has plans in hand for a most interesting meeting. Dr. Howard H. Hepburn is chairman, Dr. Gordon C. Gray, vice-chairman, and Dr. J. O. Baker, secretary of the Committee on Local Arrangements.

A general outline of the program is as follows:

Wednesday, March 24

8.00- 9.00—Registration and general information for Fellows of the College, hospital representatives, and guests.
9.00-12.00—Operative and non-operative clinics, surgery and the surgical specialties.
10.00-12.00—Hospital conference.
12.30- 2.00—Medical motion pictures.
2.30- 4.30—Hospital conference.
4.30- 5.00—Annual meeting, Fellows of the College.
6.00- 8.00—Dinner, Fellows of the College.
7.00- 8.00—Medical motion pictures.
8.00-10.00—Scientific meeting, general surgery.
8.00-10.00—Scientific meeting, eye, ear, nose and throat surgery.
8.00-10.00—Hospital round table conference.

Thursday, March 25

8.00- 9.00—Registration and general information for Fellows of the College, hospital representatives, and guests.
9.00-12.00—Special clinics:
(a) Cancer.
(b) Fractures.
(c) Eye, ear, nose and throat.
9.00-12.00—Hospital conference, panel round table.
12.00- 1.00—Medical motion pictures.
2.00- 4.30—Hospital conference, demonstrations.
2.00- 5.00—Scientific meeting, general surgery.
2.00- 5.00—Medical motion pictures, eye, ear, nose and throat.
7.00-10.00—Medical motion pictures.
8.00-10.00—Community Health Meeting.

This meeting will be of interest not only to Fellows of the College but to the medical profession at large, and in addition, hospital trustees, superintendents, nurses, and other hospital departmental personnel are invited to attend the hospital conference.

There will be no registration fee.

Survey of Illness Amongst Unemployed in the City of Winnipeg

March 1st, 1935, to February 29th, 1936 inclusive

The Committee on Sociology of the Manitoba Medical Association presents the second survey of medical records at the Unemployment Relief Department of the City of Winnipeg. The period covered is from March 1st, 1935, to February 29th, 1936. The average number of individuals on relief per month was 31,497, and of doctors employed, 228. The same difficulties that were encountered in the first survey were also encountered in the second. Some of the reports and accounts were not complete, although quite adequate for the purpose of the Relief Office. Some data, such as age, sex, hospitalization and length of illness had not been furnished, and when records of a year old were being tabulated it was difficult, or impossible, to obtain the missing information.

This report is for the purpose of showing incidence of disease, house, office and hospital calls and the relative cost of these. It does not show the total medical costs, as much of the x-ray services and other special examinations are not included. It does not take cognizance of the quota or excess payments. The summary of the schedule of fees paid to the physicians is included and it will be seen that this payment is not intended to compensate the doctor for professional skill or knowledge, but merely to re-imburse him for actual expenditure and overhead outlay necessary for the proper care of these patients. The present figures cannot be accepted as being an estimate of the cost of illness under normal conditions. A summary of medical costs for this period was published in *The Manitoba Medical Association Review,* May, 1936.

Venereal diseases have been treated in the Provincial Clinic at the St. Boniface Hospital, and chest x-rays have been practically all done at the Central Tuberculosis Clinic.

The limited number of calls on cases will be noted and also the small cost per case. Pneumonia illustrates this: 178 cases of pneumonia costing, on the average, $5.56. It may be that some doctors were making more calls than they were reporting or charging for and it was difficult to classify some of the calls as medical or surgical. In some cases one or more calls were made and then the case operated on and many of these pre-operative calls were charged against surgery. The surgical fee included the operation fee and post-operative treatment. Many infectious cases, after the first visit, were admitted to the Municipal Hospital where they came under the hospital staff.

Attached is a statement showing the average relief population during the time under consideration, classified as to sex, age groups, occupation and nationality.

Appended is a mortality report. It should be noted that the average population does not cover all medical risks for although this is a correct average, the personnel was constantly changing.

This report has been made possible through the courtesy of the Unemployment Relief Department of the City of Winnipeg, who gave access to all records and provided space for the clerical assistants. The Department of Health of the Province of Manitoba showed its interest by supplying extra clerical assistance, and also financing some of the work.

The Committee on Sociology is deeply indebted to Dr. Howard Harvey, Medical Referee Officer of the Unemployment Relief Department, and his clerical staff. Dr. Harvey gave freely of his services and counsel at a time when serious difficulties had arisen, and supervised the preparation of the report in its final form.

An explanation of the terms "excess" and "quota" is necessary.

Under the original agreement with the City of Winnipeg, no doctor could receive more than $100.00 per month regardless of the amount of work done. If he earned up to $100.00 he was paid in full. If he earned $125.00 or $400.00 he was still paid only $100.00.

This was subsequently modified. A doctor who now earns $100.00 to $150.00 per month receives only $100.00. Of earnings above $150.00 per month sixty per cent is paid up to another $50.00. The total earnings with this added percentage therefore cannot exceed $150.00.

The saving to the City last year under excess earnings was nearly $13,000.00. That is to say the quota reduced the total money paid for medical services by this amount.

The medical relief scheme is in operation in 14 self governing areas which comprise Greater Winnipeg. A doctor may attend patients in several of these areas. Should his total earnings for a month exceed $100.00 a pro-rata reduction is made, so that each municipality pays its quota or share of $100.00 to the doctor.

A brief summary of the fees for medical services for the unemployed follows. It will be noted that these are only a fraction of the fees usual in private practice and are intended only to reimburse the doctor for actual expenditure and overhead expenses resulting from the care of unemployed patients.

GENERAL FEES

Office	$ 1.00
House	1.50
Hospital (Every second day unless exceptional circumstances)	.50
Consultation	3.00
Major Operations	25.00 and 35.00
Confinements in Hospital (Including ante and post natal care in a normal case).	10.00
Confinements in Home (Including ante and post natal care in a normal case).	20.00
Anaesthetics (Major)	5.00
Anaesthetics (Minor) (Unless the anaesthetist is a salaried employee of the Hospital and the anaesthetic is administered during his hours of duty).	3.00

SPECIAL FEES

X-ray fees	$5.00 to $15.00
Radium fees	$15.00 to $25.00
Laboratory fees	50c to $3.00

(with the exception of lumbar puncture $10.00, for which $5.00 is paid for the puncture and $5.00 for the examination).

Eye, Ear, Nose and Throat Fees:

Consultation with other physicians and report	$3.00
Visit to hospital (initial)	1.50
Visit to hospital (subsequent)	.75
Visit to home or in office	2.50
Subsequent Visits:	
To home	1.50
To office	1.00

Above fees to include such treatment as can be carried out at time of visit, viz.:—Removal of foreign body from eye, External disease of eye, Injuries. burns, etc., Hordeolum, Epilation, Cerumen, Hearing tests, Abscess of canal wall, Otitis Media dressings, Eustachian catheterization, Pillitzerization, Haemorrhage (nasal), Septal ulceration, Cauterization, Removal of single polypus, Indirect laryngoscopy, Anterior and posterior rhinoscopy and similar procedures.

Operation fees ..... 5.00 to 35.00

SURGICAL FEES

Revised schedule of fees for surgical operations in relief cases, effective from December 5th, 1935, and accepted by the City of Winnipeg only.

Respiratory Dis.:

Empyaema	$15.00
Bronchoscopy	15.00

Eye, Ear, Nose and Throat:

Antrum or Sinus (Radical)	$35.00
Otitis Media Paracentesis (in office)	2.50
" " " (in house and hospital)	5.00
Mastoid	35.00
Eye Operations ‡	
Tonsillectomy	10.00

General Diseases:

Diabetic Gangrene ‡	
Goitre	30.00
T. B. Glands and Adenitis	25.00

Circul. Sys. (Haemorrh)

Digestive System:

Gastric Ulcer	35.00
Appendicitis	25.00
Rectal Abscess, etc.	10.00
Intususception	35.00
Gall Bladder Disease	35.00
Bowel Obstruction	35.00
Hernia	25.00
Cirrhosis of Liver ‡	
Ruptured Liver ‡	

Gen-Urinary System:

Nephritic Abscess	25.00
Stone in Bladder	25.00
Urethral Caruncle	15.00
Renal Calculus	35.00
Papiloma of Bladder ‡	
T. B. Kidney	35.00
Prostatectomy	35.00
Punch Operation	25.00
Hydrocele (Radical)	15.00

Female Genital Organs:

Fibroids and Other Uterine Operations	35.00
Pelvic Cellulitis	25.00
Ovarian Cyst	25.00
Salpingitis	25.00
Ectopic Pregnancy	25.00
Caesarian Section	35.00
Mastitis ‡	
Perineal Tear	25.00
General Repair Suspension	35.00

Bones and Muscles:

Osteo-myelitis ‡	
Bone Tumor ‡	
Ruptured Muscle ‡	
Club Feet	35.00
T. B. Hip	35.00
T. B. Spine	**35.00**
New Growths ‡	
Hare Lip & Cl. Pal	20.00 and 35.00
Minor Injuries ‡	
Fractures ‡	
Minor Operations, Sprains, Dislocations ‡	

‡ **Fees to be based on skill and time required, not to exceed $35.00.**

Morbidity Statistics

MEDICAL DISEASES	No. of Cases	% of Cases	No. of Cases per 1,000 Pop.	House Calls	Office Calls	Hospital Calls	Total Cost
TOTAL RESPIRATORY DISEASES	5,474	24.69	173.8	6,223	3,567	1,141	$13,460.00
1. Influenza and Grippe	1,720		54.6	2,237	749	161	4,186.00
2. Pneumonia	178		5.7	469	71	429	989.50
3. Pleurisy	133		4.2	202	98	90	446.00
4. Diseases of Pharynx							
(a) Tonsillitis	1,032		32.8	994	620	23	2,126.50
(b) Quinsy	59		1.9	74	33	13	150.50
(c) Sore Throat	186		5.9	196	134	13	434.50
(d) Other Dis. of Pharynx	193		6.1	198	132	25	445.00
5. Diseases of Larynx							
(a) Laryngitis	105		3.3	73	73	2	186.00
(b) Croup	14		.4	18	4		31.00
6. Hay Fever and Asthma	134		4.3	191	182	122	529.50
7. Pulmonary Tuberculosis	59		1.9	70	83	45	187.00
8. Other Diseases of Resp. System	1,661		52.7	1,501	1,388	218	3,748.50
EPIDEMIC, ENDEMIC AND INFECTIONS	1,376	6.21	43.7	1,800	514	209	3,324.50
1. Typhoid Fever	2		.06		2	7	5.50
2. Measles	498		15.8	768	52	23	1,215.50
3. Scarlet Fever	101		3.2	129	9	12	211.00
4. Whooping Cough	259		8.2	347	307	12	833.50
5. Diphtheria	26		.8	25	5		42.50
6. Chicken Pox	131		4.7	158	20		257.50
7. Tuberculosis—Non. Pulm.	3		.1	4	11		17.00
8. Venereal Disease	32		1.0	14	31	149	126.50
9. Other Dis. of this Group	324		10.3	355	77	6	615.50
GENERAL DISEASES	595	2.68	18.9	526	1,078	734	2,236.00
1. Cancer—All Forms	54		1.7	161	101	402	542.50
2. Rheumatism—Acute and Chronic	194		6.2	195	273	77	604.00
3. Diabetes	60		1.9	49	196	169	354.00
4. Goitre	185		5.9	38	352	40	431.00
5. Other General Diseases	102		3.2	83	156	46	304.50
DISEASES OF NERVOUS SYSTEM	1,201	5.41	38.1	746	1,314	478	2,699.00
1. Cerebral Haem. and Apoplexy	29		.9	47	9	195	177.00
2. Paralysis	13		.4	10	15		30.00
3. Epilepsy	110		3.5	135	91	29	308.00
4. Chorea	20		.6	9	30	25	56.00
5. Neuralgia	116		3.7	63	125	1	226.00
6. Neuritis and Sciatica	262		8.3	166	367	68	650.00
7. Headache	236		7.5	76	231	42	372.00
8. Mental Dis. and Neurasthenia	315		10.0	148	361	76	636.00
9. Other Nervous Diseases	100		3.2	92	85	42	244.00
DISEASES OF EYES AND ADNEXA	317	1.42	10.1	113	635	251	942.50
1. Blepharitis	6		.2		4		4.00
2. Trachoma	1		.03		1		1.00
3. Epiphora	1		.03		1		1.00
4. Optic Neuritis	3		.1		2	8	6.00
5. Glaucoma	3		.1	5	11	25	32.50
6. Corneal Ulcer	17		.5	7	70	25	99.00
7. Chalazion	9		.3	3	15		22.50
8. Iritis	16		.5	4	101	52	146.50
9. Dacryocystitis	12		.4	6	27		42.00
10. Keratitis	11		.3		99	10	113.00
11. Cataract	3		.1	1	18		19.50
12. Conjunctivitis	235		7.5	87	286	131	455.50

The information gathered in this report shows in detail the incidence of diseases, classified according to the International List of Causes of Death, 1931 edition. Some departures pertaining more to causes of illness rather than a mere scheme of classification were made from it. The various groups of relating diseases were grouped into logical classes. It is essentially the same classification as was used in the previous report and the method of selecting the primary cause of illness, from several recorded symptoms also followed along the lines outlined previously.

MEDICAL DISEASES	No. of Cases	% of Cases	No. of Cases per 1,000 Pop.	House Calls	Office Calls	Hospital Calls	Total Cost
DISEASES OF EAR AND MASTOID	708	3.19	22.5	717	953	268	2,225.50
1. Otitis Media	581		18.4	666	660	218	1,799.50
2. Mastoiditis	27		.9	26	121	50	194.00
3. Other Dis. of Ear (Not Deafness)	100		3.2	25	172		232.00
DISEASES OF CIRCULATORY SYSTEM	1,459	6.58	46.3	1,205	2,125	1,061	4,573.50
1. Disease of Heart	397		12.6	700	496	698	1,894.50
2. Arterio Sclerosis	39		1.2	51	65	37	268.00
DISEASES OF CIRCULATORY SYSTEM (Con.)							
3. Haemorrhoids	150		4.7	43	205	4	271.50
4. Varicose Veins	72		2.3	32	136	85	226.50
5. High Blood Pressure	140		4.4	80	351	28	485.00
6. Adenitis	224		7.1	183	220	19	504.00
7. Other Dis.—incl. Anaemia	437		13.9	116	652	190	924.00
DISEASES AND DISORDERS OF DIGESTIVE SYSTEM	3,172	14.32	100.7	2,253	3,321	1,074	7,238.50
1. Ulcers of Stomach and Duodenum	226		7.2	119	502	136	748.50
2. Indigestion and Gastritis	532		16.9	311	562	29	1,043.00
3. Stomach Trouble (Unqualified)	941		29.9	625	862	298	1,948.50
4. Diarrhoea	230		7.3	220	131	81	501.50
5. Appendicitis	225		7.1	263	208	89	647.00
6. Hernia	93		3.0	35	107		159.50
7. Intest. Disorders—Constip.-Enteritis.-Colitis	410		13.0	201	379	62	712.50
8. Biliary Calculi	46		1.5	128	24	24	228.00
9. Cholecystitis	194		6.2	195	254	206	649.50
10. Jaundice	7		2.2	13	13	17	41.00
11. Other Dis. of Liver	7		2.2	19	9	37	56.00
12. Malnutrition	137		4.3	38	133	53	216.50
13. Other Dis. of Digest. System	124		3.9	86	137	42	287.00
DISEASE OF TEETH AND GUMS	67	.30	2.1	21	66		97.50
DISEASES OF KIDNEY AND ADNEXA	577	2.60	18.3	490	874	240	1,744.00
1. Nephritis	100		3.2	103	136	78	329.50
2. Cystitis and other Bladder Diseases	344		10.9	255	552	121	1,010.00
3. Other Diseases in this Group	133		4.2	132	186	41	404.50
NON. VEN. DISEASES OF G.U. SYSTEM	1,451	6.55	46.1	727	2,498	794	3,757.00
1. Disease of Male Organs	96		3.0	64	158	103	305.50
2. Disease of Female Organs	20		.6	10	33	4	53.00
(a) Chronic Salpingitis	23		.7	21	26	15	65.00
(b) Endometritis	36		1.1	5	67	3	76.00
(c) Acute Salpingitis	144		4.6	132	289	169	471.50
(d) Prolapsus Uteri	119		3.8	40	180	86	261.50
(e) Vaginitis	103		3.3	45	261	109	283.00
(f) Ovaritis	20		.6	13	17		36.50
(g) Pelvic Inflammation	59		1.9	39	166	39	244.00
(h) Fibroids	46		1.5	10	49	69	98.50
(i) Ovarian Cyst	28		.9	17	33	25	71.00
(j) Endocervicitis	277		8.8	64	641	71	772.50
3. Menstruation	404		12.8	224	444	90	825.00
4. Menopause	76		2.4	43	124	11	194.00
DISEASE OF PUERPERAL STATE	6	.03	1.9		10		10.00
TOXAEMIAS OF PREGNANCY	209	.94	6.6	100	298	101	498.50
CONGENITAL, MALFORMATION AND INFANCY	163	.74	5.2	95	126	54	295.50
DISEASES OF SKIN AND CELLULAR TISSUES	2,619	11.81	83.2	1,505	3,651	876	6,902.50
1. Furunculosis	95		3.0	34	171	4	228.00
2. Abscess and Infection	1,236		39.2	982	1,671	570	3,431.00
3. Scabies and Itch	123		3.9	26	175	4	216.00
4. Impetigo Contagiosa	165		5.2	73	176	16	293.50
5. Other and Unqualified Conditions	1,000		31.7	390	1,458	282	2,734.00

MEDICAL DISEASES	No. of Cases	% of Cases	No. of Cases per 1,000 Pop.	House Calls	Office Calls	Hospital Calls	Total Cost
DISEASES OF BONES AND LOCOMOTION	832	3.76	26.4	439	1,080	264	1,870.50
1. Lumbago, Myalgia and Myositis	539		17.1	242	606	73	1,005.50
2. Arthritis	214		6.8	162	324	131	632.50
3. Other Diseases of Bones and Joints	79		2.5	35	150	60	232.50
SENILITY	3	.02	.1	2		4	5.00
EXTERNAL CAUSES	1,136	5.12	36.1	843	1,306	287	2,715.50
1. Poisonings	35		1.1	38	26	42	104.00
2. Minor Injuries	1,101		34.9	805	1,280	245	2,611.50
NOT OTHERWISE CLASSIFIED	807	3.63	25.6	257	988	118	2,031.00
1. Fever of Unknown Cause	63		2.0	71	25	26	144.50
2. Fainting and Dizziness	53		1.7	40	37	6	100.00
3. Nasal Polypi	11		.3	2	11		15.00
4. Empyaema	3		.1	8	8	1	20.50
5. Non-Malig. Tumors	124		3.9	40	214	31	292.50
6. Nasal Ulcers	45		1.4	1	73	23	95.00
7. Sterility	3		.1		1		1.00
8. Gangrene	3		.1	5	8	7	18.00
9. Narcolepsy							
10. Bursitis	21		.7	54	34	1	70.50
11. Serum Sickness	6		.2	6	1		10.00
12. Referred for Refraction	152		4.8		148		736.00
13. Referred for Examination	265		8.4	16	307	10	379.50
14. Referred for Cystoscopy							
15. Hypothyroidism	58		1.8	14	121	13	148.50

MATERNITY CASES

ABORTIONS	177	18.6	5.6	92	22	90	2,328.00
(a) At Home	117		3.7	86	19	21	1,655.00
(b) At Hospital	60		1.9	6	3	69	673.00
FULL TERM	686	72.0	21.8	16	34	86	7,383.50
(a) At Home	54		1.7	9			1,036.50
(b) At Hospital	632		20.1	7	34	86	6,347.00
THREATENED ABORTION	51	5.4	1.6	80	22	41	166.00
MISCARRIAGES	38	4.0	1.2				590.00
(a) At Home	21		.7				420.00
(b) At Hospital	17		.5				170.00

SURGICAL CASES

RESPIRATORY	1		.03				25.00
1. Empyaema	1		.03				25.00
2. Bronchoscopy							
EYE, EAR, NOSE AND THROAT	664	18.3	2.1	3	19	6	10,277.00
1. Antrum Disease	7		.2		4		185.50
2. Otitis Media	34		1.1	1	9	6	951.00
3. Mastoid							
4. Eye Operations	17		.5	1	2		430.00
5. Tonsillectomy	606		19.2	1	4		8,710.50
GENERAL DISEASES	29	1.0	.9		6		716.00
1. Diabetic Gangrene							
2. Goitre	26		.8		6		681.00
3. T. B. Glands and Adenitis	3		.1				35.00
CIRCULATORY SYSTEM	15	.4	.5				280.00
1. Haemorrhoids	15	.4	.5				280.00

SURGICAL CASES	No. of Cases	% of Cases	No. of Cases per 1,000 Pop.	House Calls	Office Calls	Hospital Calls	Total Cost
DIGESTIVE SYSTEM	334	9.2	10.6	22	3	33	8,544.00
1. Gastric Ulcer	13		.4				337.50
2. Appendicitis	236		7.5	6	1	9	5,859.50
3. Rectal Fissure and Abscess	4		.1		1		51.00
4. Intussusception	1		.03				35.00
5. G. B. Disease	32		1.00	13		23	825.00
6. Bowel Obstruction	8		.25	3		1	160.00
7. Hernia	49		1.50		1		1,251.00
8. Disease of Liver	1		.03				25.00
GENITO-URINARY SYSTEM	20	.5	.6	1	8		474.50
1. Nephritic Abscess							
2. Stone in Bladder	7		.2	1	7		158.50
3. Urethral Caruncle							
4. Renal Calculi	2		.06		1		51.00
5. Papiloma of Bladder							
6. T. B. Kidney							
7. Prostate	5		.2				125.00
8. Hydrocele	6		.2				140.00
FEMALE GENITAL ORGANS	79	2.2	2.5	9	28	2	2,867.50
1. Fibroids, etc.	14		.4				395.00
2. Pelvic Cellulitis	8		.3	5	8	2	66.50
3. Ovarian Cyst	20		.6				500.00
4. Salpingitis	15		.5				375.00
5. Ectopic Pregnancy	3		.1	4			1,086.00
6. Caesarian Section	6		.2				160.00
7. Mastitis	3		.1		2		27.00
8. Perineal Tear and Suspension	10		.3		18		258.00
BONES AND MUSCLES	22	1.0	.7	1			147.50
NEW GROWTHS	8		.3	12	5		167.50
MINOR INJURIES	21		.7	19	32	5	144.50
MINOR OPERATIONS	966	26.6	30.6	16	73	49	5,698.64
FRACTURES	182	5.0	5.8	5	4		3,489.50
SPRAINS							
DISLOCATIONS	16		.5	2	3		148.00
HARE LIP AND CLEFT PALATE	2		.06	1	1		37.50
INJECTIONS-HAEMORRHOIDS	4		.1		11		19.00
CURRETTAGE	52	1.4	1.7		7	17	616.50
HAEMORRHAGE	138	3.8	4.4	159	102	60	377.00
SUBMUCOUS RESECTION	4		.1		1		77.50
LIGATION OF CATROID ARTERY	1		.03				25.00
HYDRONEPHROSIS	4		.1				100.00
CANCER	7	1.9	.2				200.00
PERFORATION OF ILIUM	1		.03			4	27.00
REMOVAL OF DIVERTICULUM	1		.03				25.00
CRUSHING OF ABDOMEN, HAEMORRHAGE LAPAROTOMY	1		.03				25.00
LAPAROTOMY	4		.1				85.00
NASAL INFECTION	1		.03				25.00
STERILITY	1		.03				26.00
PROLAPSUS UTERI	3		.1				75.00
ANAESTHETICS	402	11.1	12.7				1,488.00
X-RAY							874.00
SPECIAL EXAMS	221	6.1	7.0	1	31		1,324.50
CONSULTATIONS	416	11.5	13.2	3	2		1,163.50
ANTI TOXIN	10		.3	3	10		16.50

Mortality Statistics

CAUSE OF DEATH	Sex		— AGES —									
	F	M	0 5	6 10	11 15	16 20	21 30	31 40	41 50	51 60	61 70	Over 70	Total
INFECTIOUS AND PARASITIC DISEASES													
Polio-encephalitis		1	1										1
Cerebro-spinal Meningitis	1		1										1
T.B. Meningitis	1		1										1
Epidemic-encephalitis	1		1										1
Pulmonary T.B.	1						1						1
CANCER AND OTHER TUMOURS CANCER AND OTHER MALIGNANT TUMOURS													
Carcinoma of Stomach	3									3			3
Carcinoma of Bladder		1									1		1
Carcinoma of head of Pancreas		1										1	1
Carcinoma of left lung		1							1				1
Carcinoma of glands of the neck	1										1		1
Carcinoma of lower jaw		1								1			1
Carcinoma of cervixuteri	1								1				1
Adeno-carcinoma of thyroid gland	1							1					1
BENIGN TUMOURS													
Cyst of brain	1							1					1
Wilms tumour of Kidney	1		1										1
Cerebral tumour	1							1					1
Rheumatic Diseases, etc.													
Tetany, Infantile		1	1										1
DISEASES OF BLOOD AND BLOOD-FORMING ORGANS													
Agranulocytosis	1							1					1
CHRONIC POISONING AND INTOXICATION													
Acute Intestinal Intoxication		1	1										1
DISEASES OF NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE													
Cerebral Haemorrhage	4								1	3			4
Cerebral Embolus	1							1					1
Meningitis		1	1										1
Pneumo Coccal Meningitis	1		1										1
DISEASES OF THE CIRCULATORY SYSTEM DISEASES OF THE HEART													
Myocardial Failure		2						1			1		2
Chronic Myocarditis	3	1								2	2		4
Acute Myocarditis	1											1	1
Myocarditis		1										1	1
Coronary Occlusion		1					1						1
Acute Congestive Heart Failure		1	1										1
Thrombosis of Coronary Artery	1					1							1
Valvular Insufficiency of the Heart		1										1	1
Chronic Endocarditis	1						1						1
DISEASE OF ARTERIES AND VEINS													
Aneurysm of Aorta		1									1		1
DISEASES OF RESPIRATORY SYSTEM													
Pneumonia	2						1	1					2
Pneumonia, Lobar	1	5	1	2			1		1	1			6
Pneumonia, Broncho–	1	2	2					1					3
Pneumonia, Broncho–, Acute	1		1										1
Bronchitis, Chronic	1											1	1
Empyema, Acute	1		1										1
DISEASES OF DIGESTIVE SYSTEM													
Peritonitis	1	1		1					1				2
Peritonitis, Acute Streptococal		1	1										1
Entero-colitis, Acute		1	1										1
Cirrhosis of Liver	1								1				1
Intestinal Obstruction		1	1										1
Gastro Enteritis	1		1										1

CAUSE OF DEATH	F Sex	M Sex	5 0	10 6	15 11	20 16	30 21	40 31	50 41	60 51	70 61	70 Over	Total
DISEASES OF GENITO-URINARY SYSTEM													
Uterine Haemorrhage	1							1					1
Chronic Nephritis	1				1								1
Uraemia, Chronic Nephritis		1									1		1
Nephritis, Chronic Interstitial		1							1				1
DISEASE OF PREGNANCY, CHILD BIRTH AND THE PUERPERAL STATE													
Abortion, Septicaemia	1							1					1
DISEASES OF EARLY INFANCY													
Premature Birth Injuries	1		1										1
ACCIDENTS AND OTHER EXTERNAL VIOLENCE													
Asphyxia-Drowning		5	1	3						1			5
Fracture of Skull	1		1										1
AUTOMOBILE-MOTORCYLCE ACCIDENTS													
Severe Crushing of Thorax		1				1							1
Fracture of Skull		1	1										1
Shock and Haemorrhage		1								1			1
No record of cause of death	3	1		1			1			2			4
Totals	43	39	24	6	1	2	6	10	7	14	7	5	82

Department of Health and Public Welfare

NEWS ITEMS

The following is a synopsis of a public address given by the Honourable Mr. I. B. Griffiths, Minister of Health and Public Welfare, at Dauphin, Manitoba:—

"Problems of health and public welfare are not of great concern to people who are themselves enjoying good health and who are independent of the social care and protection which is provided by the Province. Few people are aware that the Department of Health and Public Welfare is the largest spending department of the Provincial Government. Out of a total of fourteen millions collected from the taxpayers, approximately seven and one-half are controllable. Of the seven and one-half millions, over two millions are required every year to maintain the social services which come within the jurisdiction of the Department and which may be classified under three heads—

I. CUSTODIAL OF THE MENTALLY AFFLICTED. In the Province of Manitoba, we have four institutions, —the Psychopathic Hospital, which acts as a clearing house and from which the two types of patients are directed,—the mental defectives to Portage la Prairie and the mentally diseased to either Selkirk or Brandon. Over seven millions are invested in buildings and equipment and approximately 2,800 persons are being looked after under this category, the annual charges amounting to $633,100.74. It is interesting to note that in the Province of Manitoba, the number of mental deficients is steadily increasing and will involve further capital expenditures unless we attempt to check insofar as it is possible, some of the causes at their source. Venereal disease alone is responsible for the plight of at least 10% of the inmates of our mental hospitals, 15% of our totally blind and 18% of deaths from chronic heart troubles. Fortunately, this type of disease can be cured if medical men can only get a chance to treat its victims in the early stages of the disease and for a period of time.

II. THE SECOND DIVISION IS THE CHILD WELFARE DEPARTMENT, which every year looks after an average of 980 families containing some 3,000 children. It endeavours to keep together families, the heads of which are either dead or totally incapacitated. Included in the work of this Division are the neglected children, the children of unmarried mothers and the placing of many children in good homes for adoption, who would otherwise live in institutions. This phase of the work involves an expenditure of around $500,000.00 each year.

III. THE THIRD DIVISION OPERATES UNDER THE PUBLIC HEALTH ACT and within its scope and regulations deals with Disease Control, Sanitation, Food Control, etc. This Division is also responsible for checking our hospitalization costs and grants, and entails an outlay of $500,000 a year.

An average of 2% or 180,000 people in the Dominion of Canada are sick every day and this colossal economic loss should give us cause for thought and careful action. In the Province of Manitoba we have about 40 general hospitals scattered in various parts. Last year no fewer than 71,500 persons were hospitalized, their total stay amounting to well over a million days. The cost alone in the way of grants from the Government amounted to over $400,000 and hospitalization for patients from Unorganized Territory amounted to $100,000.

In the Province of Manitoba we have a population of about 730,000 people spread over an immense area, —some 300 miles in width and about 800 miles, or more, in depth. To minister to the medical needs of these people, there are approximately 590 medical practitioners, 315 of whom practise in Winnipeg and environment and 275 for the balance of the Province. This means one doctor to every 900 people in urban centres, one doctor to every 2,000 people in organized municipalities, and one doctor to every 5,000 people in unorganized territory. It can be readily understood the great need which exists for information and the importance of preventive measures dealing with all types of disease, especially in view of the great suffering and economic losses that could be avoided were proper steps taken.

One cannot allow this oportunity to pass without expressing gratitude for what has already been accomplished by the medical profession. A careful check-up of the records shows that great advances have been made in safeguarding the health of the people. One rarely hears of the dreaded disease, Smallpox. The mortality rate for typhoid fever during the past 30 years has dropped from 39.7 to 1.6 and for diphtheria from 31.5 to 2.3 per 100,000 of our population. With systematic immunization these should soon be eliminated altogether. On the other hand, the mortality rate from Cancer has jumped from 34.5 to 100.6, and infantile paralysis is still a baffling medical problem.

Judged by almost any standard one can say with safety that great progress is being made in regard to health matters—Life expectancy has been generally increased by some eleven years during the past 25 years; and the present day tendency is to work toward the preventive rather than the curative side of disease. Unfortunately, in these difficult economic times, and when so much of our public revenue is used for custodial work and care, Governments are unwilling to spend much money on preventive measures which would prove profitable and beneficial in the long run. However, your Government is carrying on an educational campaign along these lines by the use of radio lectures, pamphlets, clinics and the services of the public health nurses, and is receiving excellent co-operation and help from many voluntary organizations. We have many such agencies contributing to the well-being of our people and special mention is made of our Children's Aid Societies, the Various Social Welfare Agencies, Sanatorium Board and the Cancer Relief and Research Institute, who by their excellent work relieve the taxpayers considerably. On the whole, Manitoba is a healthy province. While we have a considerable burden to carry in looking after the people in our institutions, and caring for those less fortunate than ourselves; nevertheless, there is a general tendency to the belief that "it is much better to prevent than to cure," and it is to this end that our energies must be directed in the future.

COMMUNICABLE DISEASES REPORTED

Urban and Rural - December, 1936.

Scarlet Fever: Total 267—Winnipeg 97, Rockwood 24, St. James 21, Kildonan West 16, Macdonald 10, Kildonan East 8, St. Boniface 6, St. Vital 6, Grandview Rural 4, Brooklands 3, Carman 3, Kildonan North 3, St. Anne 3, Unorganized 3, Emerson 2, Flin Flon 2, Louise 2, Portage City 2, Rivers 2, Sifton 2, Stanley 2, Tuxedo 2, Winnipegosis 2, Brandon 1, Cameron 1, Gilbert Plains Rural 1, Gilbert Plains Village 1, Grandview Town 1, Manitou Village 1, Minitonas 1, Rhineland 1, Roblin Rural 1, Shell River 1, Russell Town 1, Strathclair 1, Whitehead 1 (Late Reported: November, Louise 14, Kildonan West 4, Ellice 2, Grandview Rural 2, St. Boniface 2, Unorganized 2, Lansdowne 1, Manitou Village 1, Rockwood 1).

Chickenpox: Total 204—Winnipeg 131, St. Boniface 22, Kildonan West 15, Brooklands 7, Kildonan East 5, Unorganized 5, St. Vital 3, Brandon 1, Fort

Garry 1, St. James 1, The Pas 1, Victoria 1, Woodlands 1 (Late Reported: November, St. Boniface 5, Kildonan West 2, Kildonan East 1, St. James 1, Unorganized 1).

Mumps: Total 133—Winnipeg 19, Roblin Rural 4, Souris 3, Brooklands 2, Glenwood 2, Brandon 1, Hanover 1, Kildonan East 1, Norfolk North 1, Portage City 1, St. Vital 1 (Late Reported: June, Souris 15; July, Souris 25; August, Glenwood 15, Souris 10; September, Souris 10, Glenwood 5; October, Souris 5, Glenwood 5; November, Souris 5, Glenwood 2).

Measles: Total 90—Unorganized 36, Westbourne 9, Winnipeg 5, Oakland 4, Lawrence 3, St. Boniface 3, Gladstone Town 2, Elton 1, Flin Flon 1, Kildonan East 1, Lorne 1, St. Clement 1, Virden 1 (Late Reported: November, Unorganized 17, Neepawa 2, Rockwood 2, St. Boniface 1).

Tuberculosis: Total 39—Winnipeg 10, Unorganized 5, Portage City 2, Strathcona 2, Swan River Rural 2, St. Anne 2, Brandon 1, Dauphin Rural 1, Dauphin Town 1, Ethelbert 1, Franklin 1, Morden 1, McCreary 1, Norfolk North 1, Piney 1, Ritchot 1, Roblin Rural 1, Saskatchewan 1, Selkirk 1, St. Boniface 1, St. Francois Xavier 1, Woodlands 1.

Anterior Poliomyelitis: Total 35—Brooklands 3, St. Boniface 2, Shell River 1, Westbourne 1, Winkler 1 (Late Reported: August, Roland 1, St. Paul East 1; September, Elton 4, Grey 2, Odanah 1, Portage Rural 1, Rosedale 1, Silver Creek 2; October, Harrison 2, Saskatchewan 2, Elton 1, Odanah 1, Pembina 1, Selkirk 1, Shellmouth 1, St. Boniface 1, Winkler 1, Woodworth 1; November, Clanwilliam 1, Fort Garry 1).

Whooping Cough: Total 16—Winnipeg 10, Unorganized 1 (Late Reported: November, Unorganized 5).

Influenza: Total 13—Unorganized 7, Victoria 1 (Late Reported: October, Birtle 1, Cartier 1, Norfolk South 1, St. Paul East 1; November, Unorganized 1).

Erysipelas: Total 12—Winnipeg 5, Kildonan East 2, Arthur 1, Kildonan West 1, Roblin Town 1, Swan River Rural 1, St. James 1.

Diphtheria: Total 12—Winnipeg 8, Stanley 3, Whitemouth 1.

Typhoid Fever: Total 6—Brandon 1, Stanley 1, St. James 1, The Pas 1, Unorganized 1 (Late Reported: November, Unorganized 1).

German Measles: Total 4—Carman 3, Rivers 1.

Diphtheria Carriers: Total 4—Winnipeg 3, St. Boniface 1.

Septic Sore Throat: Total 3—Rivers 2, St. Vital 1.

Cerebrospinal Meningitis: Total 2—Hanover 1, St. Vital 1.

Para Typhoid Fever: Total 1—Unorganized 1.

Venereal Disease: Total 134—Gonorrhoea 85, Syphilis 49.

DEATHS FROM ALL CAUSES IN MANITOBA
For the Month of November, 1936.

URBAN—Cancer 35, Pneumonia 14, Tuberculosis 8, Influenza 3, Infantile Paralysis 2, Diphtheria 1, Puerperal Septicaemia 1, all others under 1 year 4, all others 144, Stillbirths 8. Total 220.

RURAL—Cancer 29, Pneumonia 21, Tuberculosis 13, Influenza 4, Diphtheria 2, Infantile Paralysis 3, Puerperal Septicaemia 1, Erysipelas 1, Syphilis 1, all others under 1 year 5, all others 141, Stillbirths 14. Total 235.

INDIAN—Tuberculosis 17, Pneumonia 4, Influenza 2, Measles 1, Typhoid Fever 1, all others under 1 year 2, all others 12, Stillbirths 2. Total 41.

Medical Library
University of Manitoba

A summary of the contents of some of the journals available for practitioners, submitted by the Faculty of Medicine of the University of Manitoba. Compiled by T. E. HOLLAND, B.Sc., M.D. (Man.), F.R.C.S. (Edin.).

"The Practitioner"—January, 1937.

This number contains a symposium on Gynaecology comprised of the following articles.

"The Diagnosis and Treatment of Fibroids"—by Victor Bonney, M.S., B.Sc., F.R.C.S., Middlesex Hospital.

"The Diagnosis and Treatment of Early Malignant Disease of the Uterus"—by F. J. Browne, M.D., D.Sc., F.R.C.S. (E)., F.C.O.G., University College Hospital, London.

"Some Gynaecological Sequelae of Natural Delivery"—by Wilfred Shaw, M.D., F.R.C.S., F.C.O.G., St. Bartholomew's Hospital.

"Leucorrhoea and Vaginal Discharge"—by Amy M. Fleming, M.D., D.Sc., F.C.O.G., London School of Medicine for Women.

"The Disorders of Menstruation"—by O'Donel Browne, M.B., F.R.C.P. (I.), M.C.O.G., King's Professor of Midwifery, Trinity College, Dublin.

"The Menopause"—by V. B. Green-Armytage, M.D., F.R.C.P., F.C.O.G., London.

The following additional articles are included in this issue.

"The Relief of Pain"—by Wilfred Harris, M.D., F.R.C.P., St. Mary's Hospital, London.

"Abdominal Pain"—by W. H. Ogilvie, M.A., M.D., M.Ch., F.R.C.S., Surgeon, Guy's Hospital.

"The Nasal Route of Medication"—by Raymond A. Dart, Professor of Anatomy, University of Witwatersrand.

"Methods of Treatment of Obesity"—by Herbert Coombs, M.D., et al.

"The Canadian Medical Association Journal"—January, 1937.

"Diverticulitis of the Sigmoid Colon"—by Roscoe R. Graham, M.B., Toronto.

"Studies in Mineral Metabolism" III. Calcium and the Kidney:—by Bruce Chown, M.D., Margaret Lee, M.Sc., and John Teal, Winnipeg.

"Fixed Skeletal Traction in the Treatment of Certain Fractures at the Wrist"—by J. A. MacFarlane and R. H. Thomas, University of Toronto.

"Nephritic Lipaemia"—by Eldon M. Boyd, Kingston, Ontario.

"The Curability of Carcinoma of the Stomach"—by Verne C. Hunt, M.D., Los Angeles, Cal.

Read at the Annual Meeting of the Canadian Medical Association, Victoria, 1936.

"Embolism and Thrombosis of the Larger Arteries: Their Diagnosis and Treatment"—by Duncan Graham, Toronto.

"The Medical Treatment of Ringworm of the Scalp"—by D. E. H. Cleveland, M.D., C.M., Vancouver.

"Measles Encephalitis"—by Harold W. Price, Calgary.

"The Interpretation of Some Common Digestive Symptoms"—by J. W. Scott, Edmonton.

"The Interpretation of Heart Symptoms"—H. N. Jennings, M.B., Calgary.

"The Lancet"—January 9th, 1937.

"The Nose and Throat in Relation to Rheumatic Diseases"—by Harold Barwell, M.B., F.R.C.S., London.

"Carcinoma of the Cervical Oesophagous"—by Robin Pilcher, M.S., F.R.C.S., London.

"Pernicious Anaemia After Nitric Acid Corrosion of the Stomach"—by G. Alsted, M.D., Copenhagen.

"Journal of the American Medical Association"—January 23rd, 1937.

"Mechanical Decompression of the Small Intestine in Ileus"—by Alton Ochsner, M.D., and Ambrose H. Storch, M.D., New Orleans.

"The Clinical Journal"—January, 1937.

"Paratyphoid Infections of the Respiratory Tract"—by James Maxwell, M.D., F.R.C.P., Physician, Royal Chest Hospital.

"Radium in Gynaecology"—by Alfred Gough, Ch.M., Leeds, F.R.C.S. (Eng.), F.C.O.G., Senior Surgeon, Hospital for Women, Leeds.

"A Series Illustrating Obscure Hip-Conditions in Children"—by M. Forrester-Brown, M.S., M.D., Lond.

"Traumatic Diaphragmatic Hernia"—by W. S. Dickie, F.R.C.S., Hon. Consulting Surgeon, N.R., Infirmary, Middlesbro.

"The Management of Congestive Heart Failure"—by John R. H. Towers, M.A., M.D., Cantab, M.R.C.P., Assistant Physician, General Infirmary, Leeds.

"Anaesthetics and Their Administration in General Practice"—by C. E. Sykes, M.B., Ch.B., D.A., Anaesthetist, Manchester Royal Infirmary.

"Some Observations on Physical Stigmata"—by O.C.M. Davis, D.Sc., Lond., M.R.C.P., Head of Department of Forensic Medicine in University of Bristol, and Percy Phillips, M.D., M.Sc., Medical Superintendent, Southmead Hospital, Bristol.

Executive Officers

PRESIDENT
GEO. CLINGAN, M.D., C.M. (Tor.).

FIRST VICE-PRESIDENT
J. D. ADAMSON, B.A., M.D. (Man.), M.R.C.P. (Edin.), F.R.C.P. (C.).

SECOND VICE-PRESIDENT
P. H. T. THORLAKSON, M.D., C.M. (Man.), F.R.C.S. (C.).

HONORARY SECRETARY
F. W. JACKSON, M.D. (Man.), D.P.H. (Tor.), Winnipeg.

HONORARY TREASURER
C. W. BURNS, M.D., C.M. (Man.), F.R.C.S. (C.), Winnipeg.

RETIRING PRESIDENT
F. G. McGUINNESS, M.D., C.M. (Man.), F.R.C.S. (C.), Winnipeg.

Advisory Council

President of Manitoba Medical Association:
GEO. CLINGAN, M.D., C.M. (Tor.)

Chairman of Council of College of Physicians and Surgeons:
C. W. BURNS, M.D., C.M. (Man.), F.R.C.S. (C.)

Dean of Faculty of Medicine:
A. T. MATHERS, M.D., C.M. (Man.), F.R.C.P. (C.)

Deputy Minister of Health and Public Welfare:
F. W. JACKSON, M.D. (Man.), D.P.H. (Tor.)

May Be Added:
M.O.H. of District.
President of District Society.
Others as required.

Members of the Executive

Members Elected at Large

S. G. HERBERT, M.D. (Man.), Winnipeg.

E. K. CUNNINGHAM, M.D., C.M. (McG.), Carman.

S. BARDAL, M.D., C.M. (Man.), Shoal Lake.

T. W. SHAW, M.D. (Man.), Russell.

(Term Expires 1937)

W. E. R. COAD, M.D., C.M. (Man.), M.R.C.S. (Eng.), L.R.C.P. (Lond.), F.R.C.S. (Edin.), Winnipeg.

(Term Expires 1937)

Representatives of College of Physicians and Surgeons of Manitoba

H. O. McDIARMID, M.D., (Man.), F.R.C.S. (C.), Brandon.

W. G. CAMPBELL, M.D., C.M. (McG.), Winnipeg.

DIGBY WHEELER, M.A., M.D., C.M., M.R.C.S. (Eng.), L.R.C.P. (Lon.)

Representative on Canadian Medical Association Executive Committee

E. S. MOORHEAD, B.A. (T.C.D.), M.B., B.Ch. (Dub.), B.A.O., F.R.C.P. (C.), Winnipeg.

Representatives of District Medical Societies

Central
W. H. CLARK, M.D. (Man.).

Southern
J. F. WOOD, M.D. (Man.).

Brandon and District
W. S. PETERS, M.D. (Man.).

North-Western
R. F. YULE, M.D. (Man.)

Winnipeg Medical
O. C. TRAINOR, M.D., C.M. (McG.).

Northern
R. E. DICKS, M.D. (Man.).

Border Medical
W. O. HENRY, B.A., M.B. (Tor.).

Committees

Committee on Sociology

E. S. MOORHEAD, B.A. (T.C.D.), M.B., B.Ch. (Dub.), B.A.O., F.R.C.P. (C.), Chairman.
F. W. JACKSON, M.D. (Man.), D.P.H. (Tor.), Secretary.
J. A. GUNN, C.B., O.B.E., B.A., M.D., C.M. (Man.), F.R.C.S. (C.).
Ross B. MITCHELL, B.A., M.D., C.M. (Man.), F.R.C.P. (C.).
C. E. CORRIGAN, B.A., M.D. (Man.), F.R.C.S. (Eng.).
CLAUDE McRAE, M.D. (Man.).
C. ATHOL R. GORDON, M.D. (Man.)
H. MEDOVY, B.A., M.D. (Man.)

Editorial Board of C. M. A. Journal

Ross B. MITCHELL, B.A., M.D., C.M. (Man.), F.R.C.P. (C.).
E. S. MOORHEAD, B.A. (T.C.D.), M.B., B.Ch. (Dub.), B.A.O., F.R.C.P. (C.).
C. W. MacCHARLES, M.D. (Man.).

Representatives to C. M. A Council

F. G. McGUINNESS, M.D., C.M. (Man.), F.R.C.S. (C.), Winnipeg.
F. W. JACKSON, M.D. (Man.), D.P.H. (Tor.).
W. S. PETERS, M.D. (Man.).
F. D. McKENTY, M.D. (Man.), F.R.C.S. (C.).
G. S. FAHRNI, M.D., Ch.M. (Man.), F.R.C.S. (C.).
P. H. T. THORLAKSON, M.D., C.M. (Man.), F.R.C.S. (C.).
M. R. MacCHARLES, M.D., C.M. (Man.), F.R.C.S. (Edin.), F.R.C.S. (C.).
T. E. HOLLAND, B.A., M.D. (Man.), F.R.C.S. (Edin.).
E. S. MOORHEAD, B.A. (T.C.D.), M.B., B.Ch. (Dub.), B.A.O., F.R.C.P. (C.).

Legislative Committee

G. S. FAHRNI, M.D., Ch.M. (Man.), F.R.C.S. (C.), Chairman.

Workmen's Compensation Referee Board

W. CHESTNUT, M.D., C.M. (Man.), Chairman.
Two members to be selected from panel for each meeting.

Committee on Maternal Mortality

J. D. McQUEEN, M.D., C.M., F.R.C.S. (C.), F.A.C.S.

Editorial Committee

C. W. MacCHARLES, M.D. (Man.), Convener.

Committee on Historical Medicine and Necrology

Ross B. MITCHELL, B.A., M.D., C.M. (Man.), F.R.C.P. (C.), Convener.

Radio Committee

R. W. RICHARDSON, M.D., Ch.M. (Man.), Convener.

Auditors

F. G. McGUINNESS, M.D., C.M. (Man.), F.R.C.S. (C.).
S. G. HERBERT, M.D. (Man.).